

Pressure Relief Valve, Poppet-Type, Direct-Acting

**VPP1-06(08,10)**

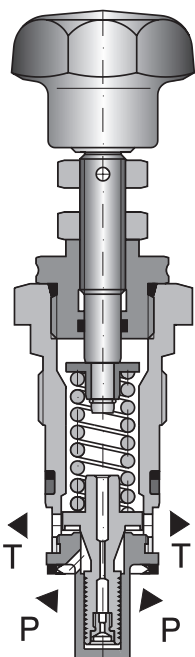
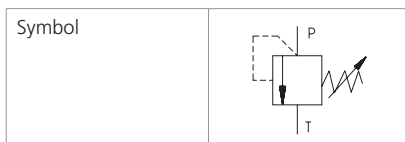
M28x1.5 / M35x1.5 • Q<sub>max</sub> 50 l/min (13 GPM) / 120 l/min (32 GPM) • p<sub>max</sub> 320 bar (4600 PSI)

**Technical Features**

- › Excellent stability throughout flow range with rapid response to dynamic pressure changes
- › Low hysteresis, accurate pressure control and low pressure drop
- › Wide pressure range up to 320 bar
- › Hardened precision parts
- › Sharp-edged steel seats for dirt-tolerant performance
- › Leak-free closing, suitable for fast cycling with long life
- › Adjustable by allen key or hand screw
- › In the standard version, the cartridge valve is black oxide coated and the valve body is phosphated

**Functional Description**

A poppet-type, direct-acting hydraulic relief valve in the form of a screw-in cartridge intended for use as a pressure limiting device for common hydraulic circuit protection. The spring acts on the poppet and presses it onto the valve seat. If the hydraulic pressure is below the pre-set value, the valve is closed. If the hydraulic force exceeds the pre-set value the valve opens and flow passes to the tank port until the system pressure falls below the spring pre-set value and the valve closes again.



Size 06



Size 10

**Technical Data**

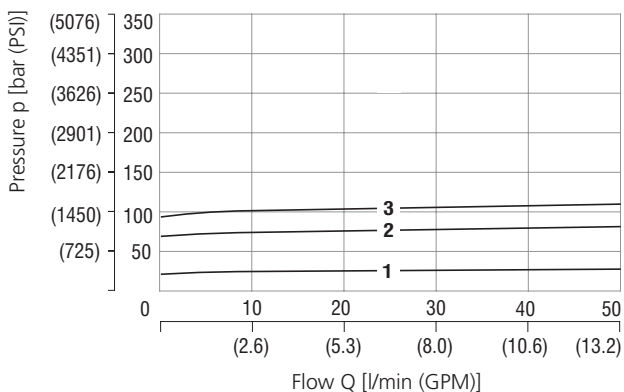
Valve size / Cartridge cavity		M28x1.5 / QP2	M35x1.5 / QT2
Max. flow	l/min (GPM)	50 (13.2)	120 (31.7)
Max. operating pressure	bar (PSI)	320 (4640)	
Fluid temperature range (NBR)	°C (°F)	-30...+100 (-22 ...212)	
Fluid temperature range (FPM)	°C (°F)	-20...+120 (-4...248)	
Mass	kg (lbs)	0.4 (0.88)	0.5 (1.10)

		Datasheet	Type	
General information		GI_0060	Products and operating conditions	
Valve bodies	In-line mounted	SB_0018	SB-QP2*	SB-QT2*
Cavity details		SMT_0019	SMT-QP2*	SMT-QT2*
Spare parts		SP_8010		

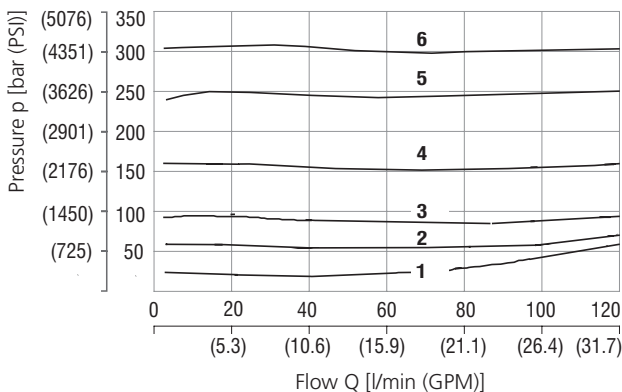
**Characteristics** measured at v = 32 mm<sup>2</sup>/s (156 SUS)

**Relief pressure related to flow rate**

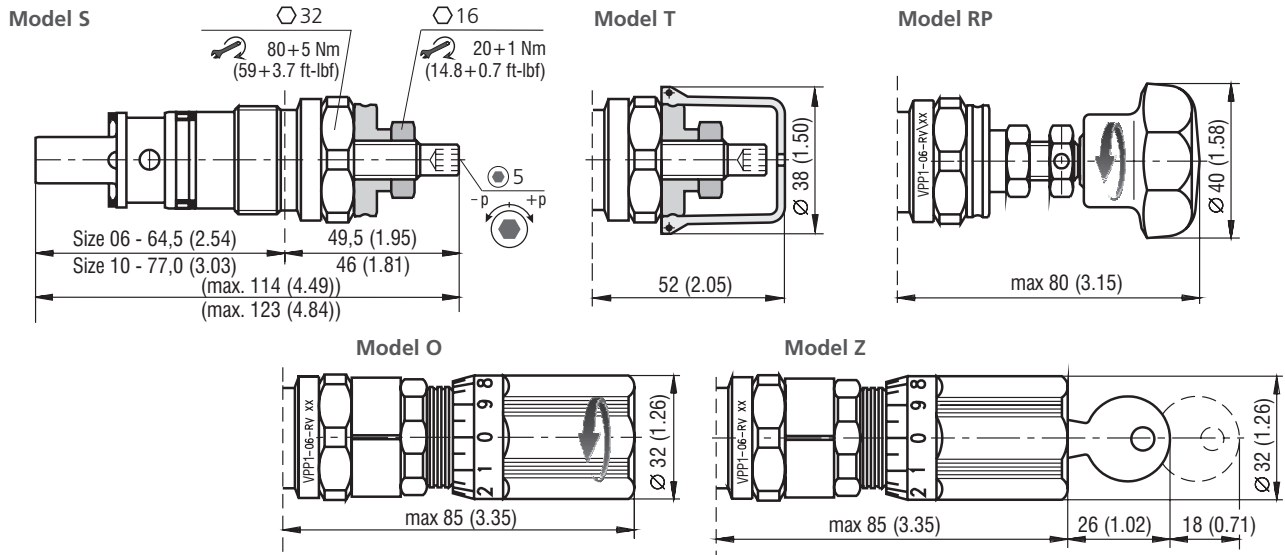
Size 06



Size 10

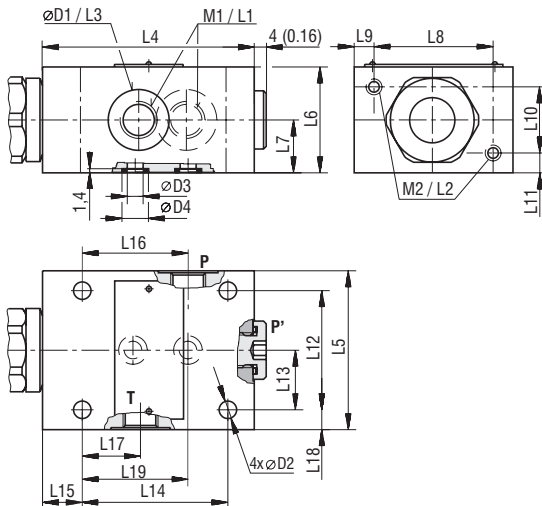


**Dimensions** in millimeters (inches)



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**Cartridge in threaded housing - models „M“, „G“ and „P“**



Model	06-xM/x	06-xG/x	06-xP/x	08-xM/x	08-xG/x	10-xM/x	10-xG/x	10-xP/x
M1	M14x1.5	G1/4	G1/4	M18x1.5	G3/8	M22x1.5	G1/2	G1/4
M2	M6			M8				
ØD1	25(0.98)			30(1.18)	28(1.10)	34(1.34)		
ØD2	6.6(0.26)			9(0.35)				
ØD3			6(0.24)					10(0.39)
ØD4			10.8(0.43)					15.6(0.61)
L1	12(0.47)			16(0.63)				
L2	10(0.39)			20(0.79)				
L3	0.5(0.02)			0.5(0.02)				
L4	80(3.15)			100(3.94)				
L5	60(2.36)			80(3.15)				
L6	40(1.57)			60(2.36)				
L7	20(0.79)			30(1.18)				
L8	45(1.77)			60(2.36)				
L9	7.5(0.30)			10(0.39)				
L10	25(0.98)			40(1.57)				
L11	7.5(0.30)			10(0.39)				
L12	45(1.77)			60(2.36)				
L13	22.5(0.89)			30(1.18)				
L14	55(2.17)			70(2.76)				
L15	15(0.59)			20(0.79)				
L16	40(1.57)			49(1.93)				
L17	20(0.79)			21(0.83)				
L18	7.5(0.30)			10(0.39)				
L19			40(1.57)					45(1.77)

Port P' (as input can be used P or P') thread M1/L1

**Ordering Code**

VPP1- [ ] - [ ] / [ ] - [ ]

**Pressure relief valve, poppet-type, direct-acting** M28x1.5 / M35x1.5

**Nominal size**

size 06 **06\***

size 08 - only models M and G **08**

size 10 **10**

\* VPP1-06 only available for pressure range 2,5; 6,3 and 10

**Adjustment option**

allen key (hex. 5), without protective cap **S**

allen key (hex. 5), with protective cap **T**

hand screw, plastic **RP**

non-lockable cylindrical hand screw **O**

lockable cylindrical hand screw **Z**

**Model**

screw-in cartridge **V**

cartridge in threaded housing - with metric threads **M**

cartridge in threaded housing - with BSP threads **G**

cartridge in subplate mounted housing **P**

**Surface treatment (cartridge valve only)**

**No designation** black oxide coating

**A** zinc-coated (ZnCr-3), ISO 9227 (240 h)

**B** zinc-coated (ZnNi), ISO 9227 (520 h)

**Seals**

**No designation** NBR

**V** FPM (Viton)

**Pressure range**

**2.5** up to 25 bar (360 PSI)

**6.3** up to 63 bar (910 PSI)

**10** up to 100 bar (1450 PSI)

**16** up to 160 bar (2320 PSI)

**25** up to 250 bar (3630 PSI)

**32** up to 320 bar (4600 PSI)